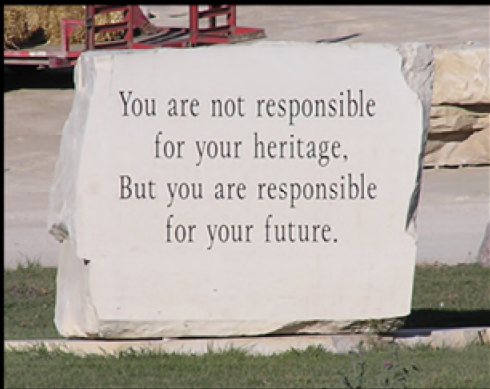


WELCOME!

Fond du Lac County Niagara Escarpment Greenway Study

September 22, 2020
Fond du Lac County
Highway Garage

Welcome & Introductions



Allen J. Buechel
Fond du Lac County
Executive

Niagara Escarpment Greenway Study

Fond du Lac County, Wisconsin

DRAFT June 2020



Prepared by the Niagara Escarpment
Resource Network with the assistance of
the East Central Wisconsin Regional
Planning Commission

Study Overview

Eric W. Fowle, AICP
*Niagara Escarpment
Resource Network*

Who We Are



Vision: A protected Niagara Escarpment corridor that provides economic, social, and environmental values for generations to come.

Mission: Protecting Wisconsin's Niagara Escarpment through geotourism, interpretation, education, advocacy and community engagement.



www.wiledge.org

www.lnrp.org

A proud program of the Lakeshore Natural Resource Partnership

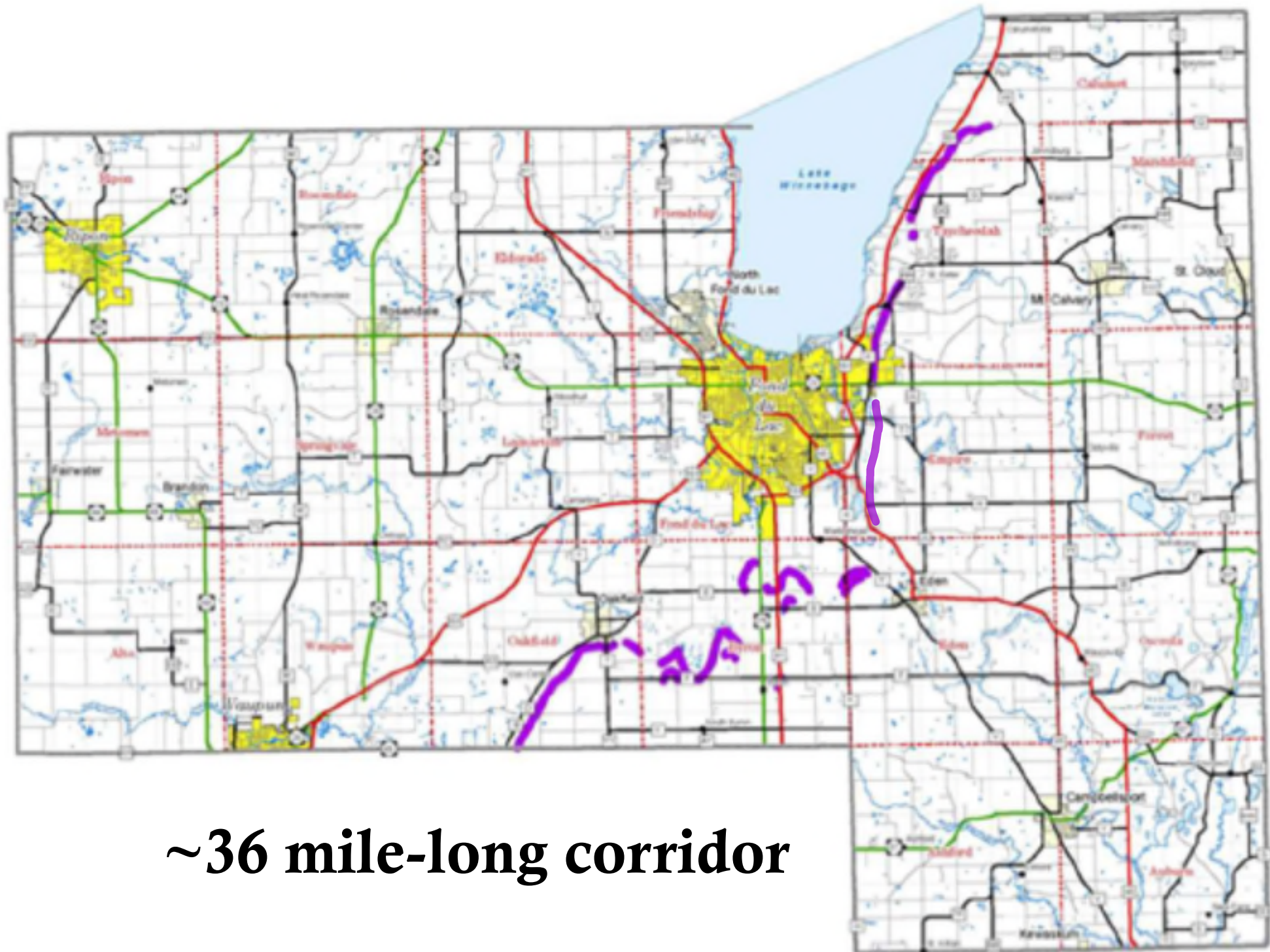
A Globally Unique Feature



Approx. $\frac{1}{4}$ (230 mi.) of the Niagara Escarpment in WI

- 1 Federal Wildlife Area
- 7 State Parks
- 1 State Forest
- 25+ State Natural Areas
- 7 State & National Trails
- 100+ County & Local Parks
- 100's of historic sites

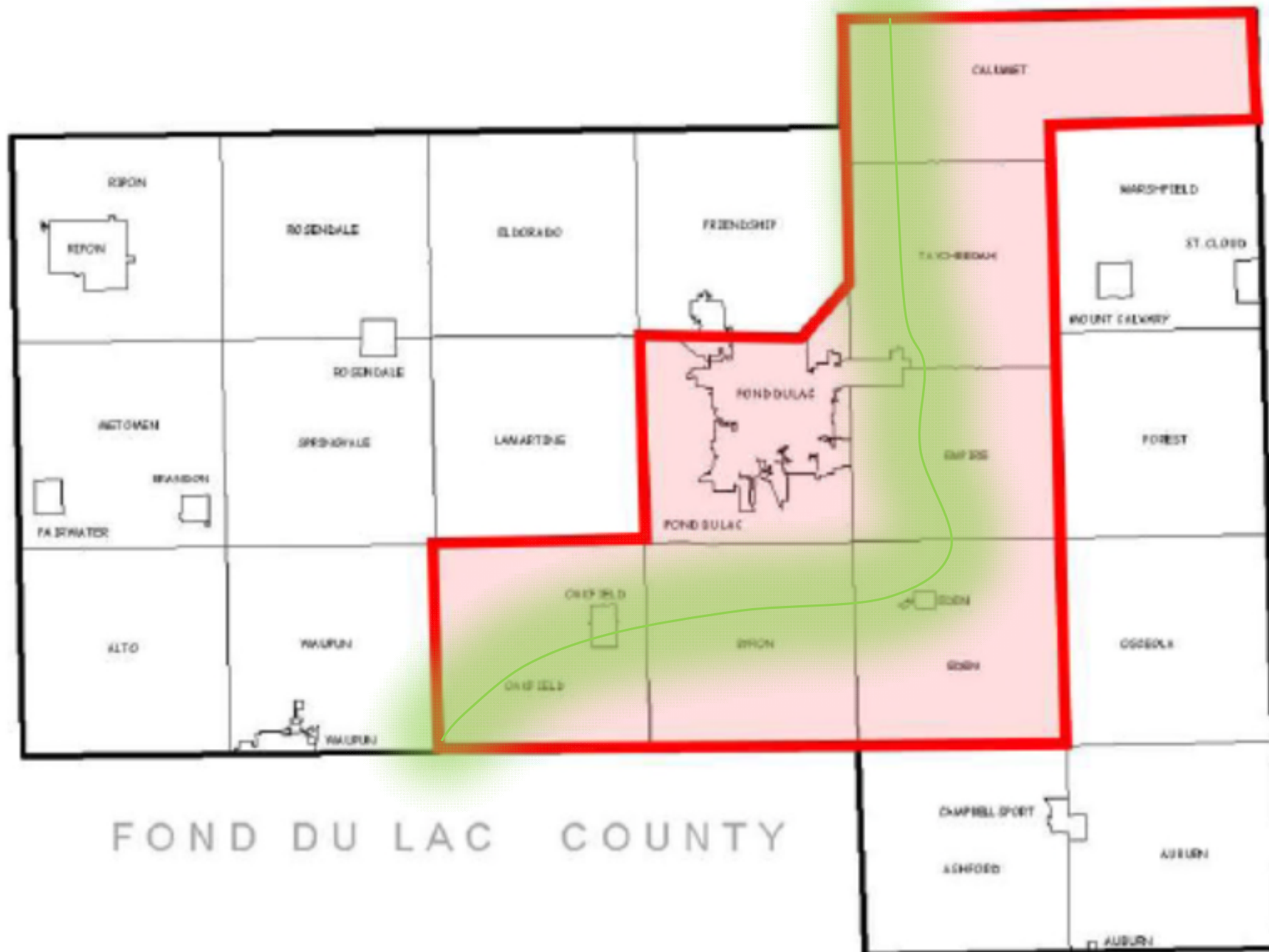
The Niagara Escarpment



~36 mile-long corridor

Study Area

7 Towns
2 Villages
1 City



Study Intent

With these conditions in mind, the following questions were raised, and to a great degree, answered in this report:

1. How do you know and **understand the relationships** between the escarpment's natural resource base and individual (or collective) property ownership patterns?
2. Which private parcels of land offer **the most opportunity** – or the most impact – for implementing existing or new programs?

Study Intent

3. How can the escarpment's natural resources, combined with existing development patterns, be best prioritized and targeted for protection?
4. How can Fond du Lac County and its communities use this information to consistently apply development standards along the Niagara Escarpment corridor which foster conservation, and where should they apply?

Study Goals

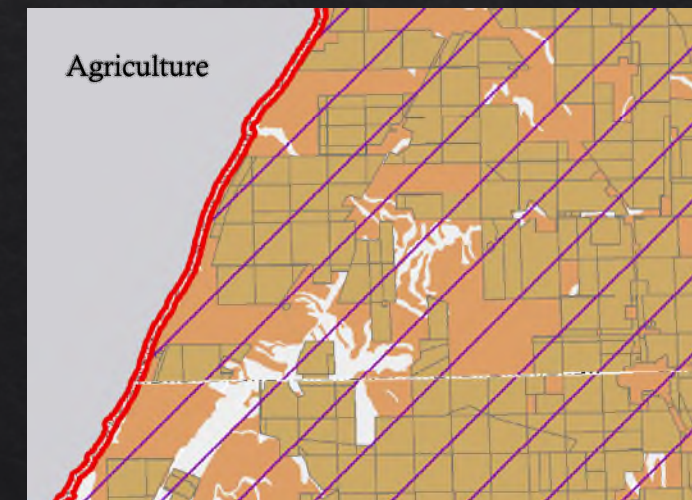
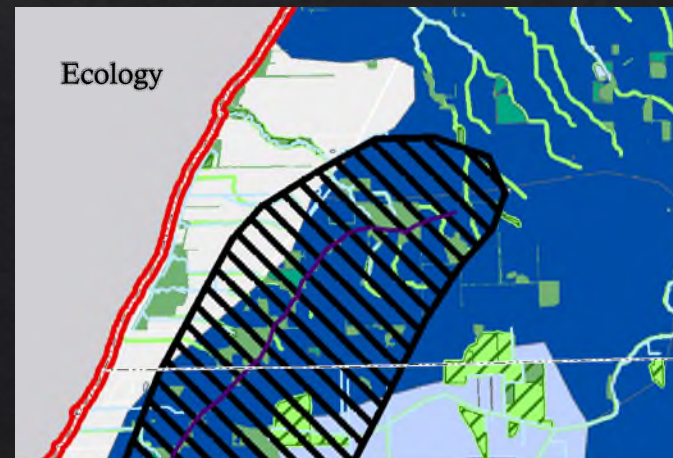
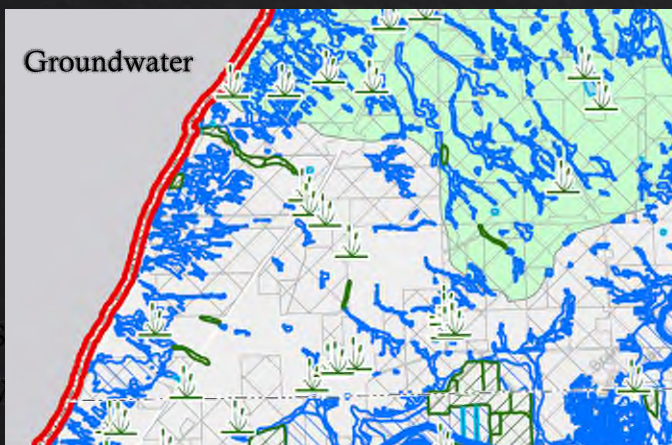
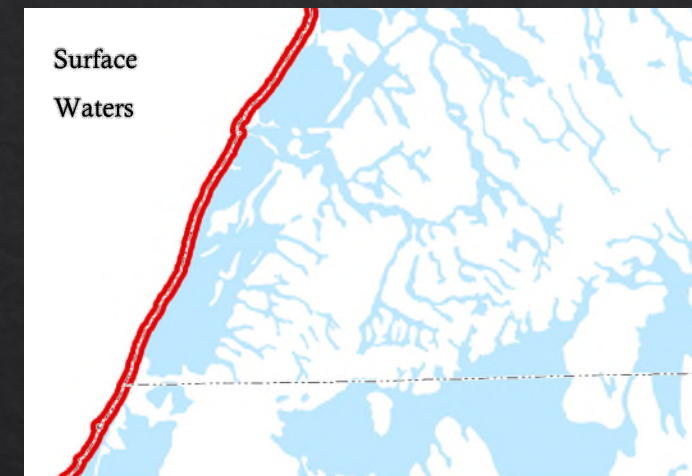
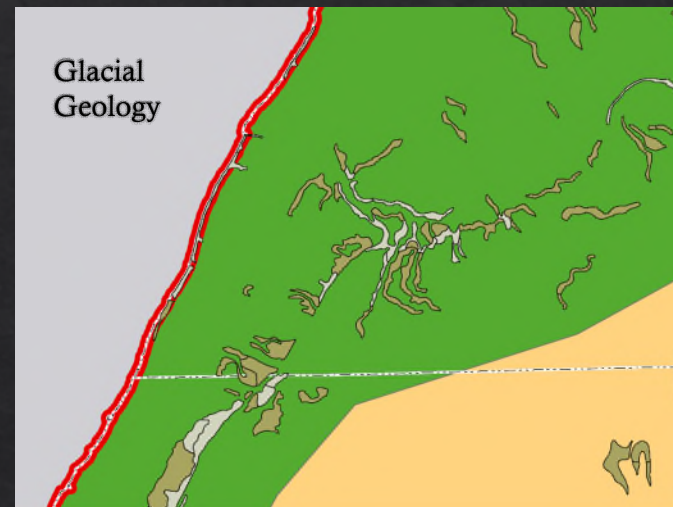
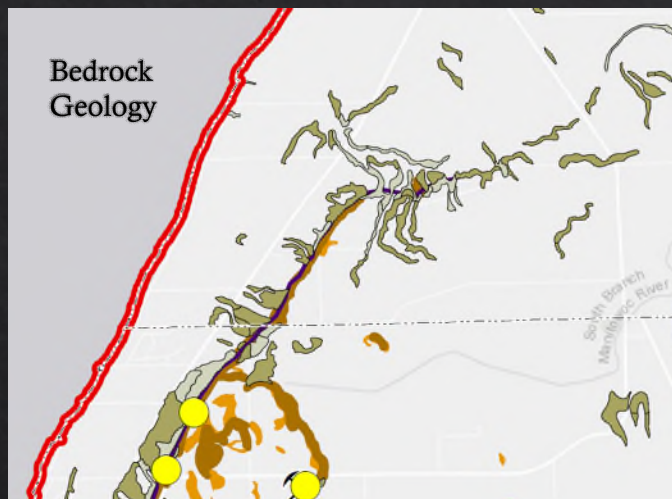
1. **Inventory**, identify, and source all known geologic, environmental, and cultural GIS data sets from a variety of sources;
2. Generate a series of Greenway Analysis maps (to the parcel level) which **assess and prioritize** the functional aspects of the resource components.
3. Determine a series of **potential definitions** for the Niagara Escarpment in Fond du Lac County;
4. Develop the basis for an **objective “vulnerability index”** for lands within the proposed Greenway.

Analysis Process & Steps

1. Inventory GIS Data
2. Resource Ranking
3. Thematic Resource Rankings / Aggregate Resource Rankings
4. Identify Vacant Parcels
5. Vacant Parcel Aggregate Rankings
6. Ranked Parcel Proximity
7. Identify Vacant Niagara Escarpment Parcels
8. Create Niagara Escarpment Greenway Basemaps

Step #1: Inventory

201 GIS layers identified / 181 GIS layers collected



Step #1: Inventory

- | | |
|------------------------|-----------------------|
| 1. Background Imagery | 11. Agriculture |
| 2. Basemap Information | 12. Cultural/Historic |
| 3. Map Boundaries | 13. Public Lands |
| 4. Bedrock Geology | 14. Recreation |
| 5. Glacial Geology | 15. Trails |
| 6. Groundwater | 16. Scenic Resources |
| 7. Surface Water | 17. Infrastructure |
| 8. Ecology | 18. Land Use |
| 9. Wildlife | 19. Zoning |
| 10. Conservation | |

Surfa
Waters

Step #2: Resource Ranking

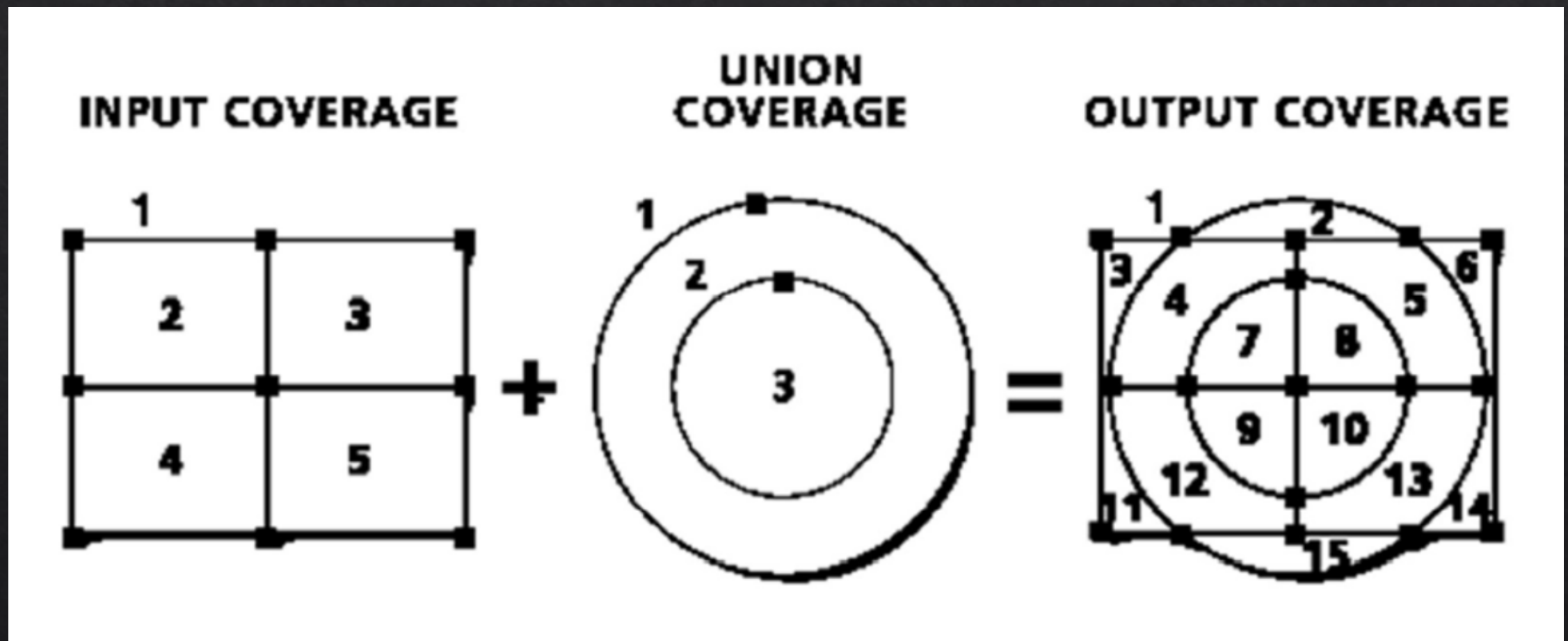
Develop and apply “Resource Importance Ranking” on a scale of 1 (low) to 5 (high)

Figure 2-1: Sample Table from GIS Inventory

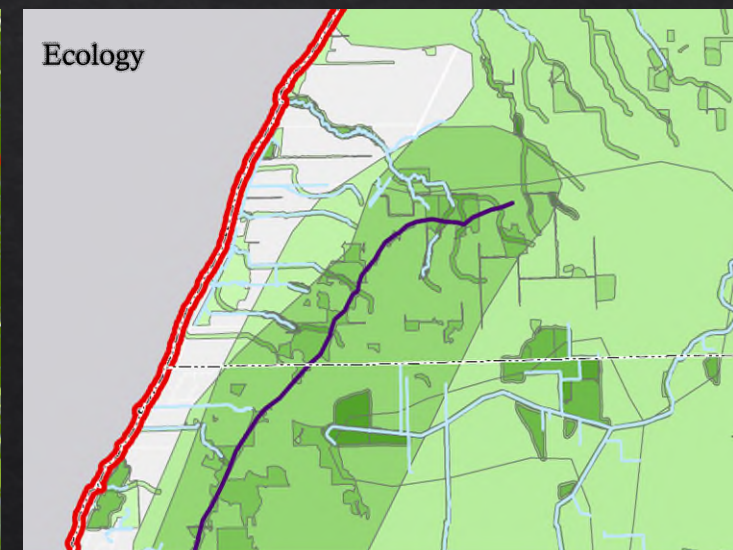
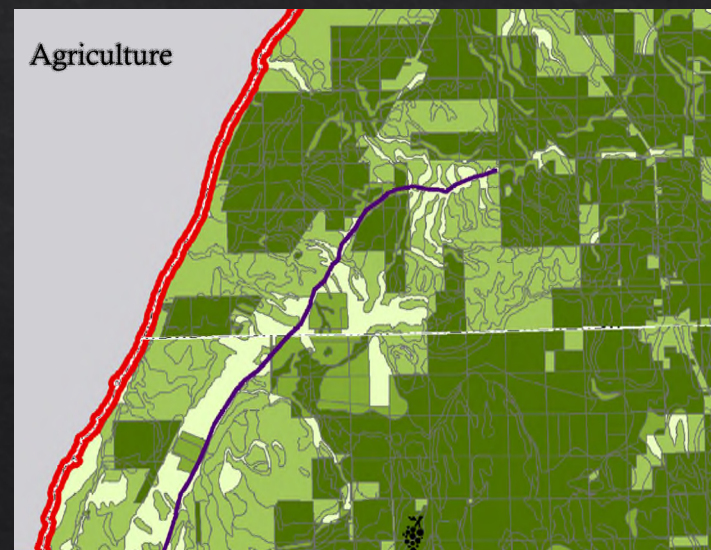
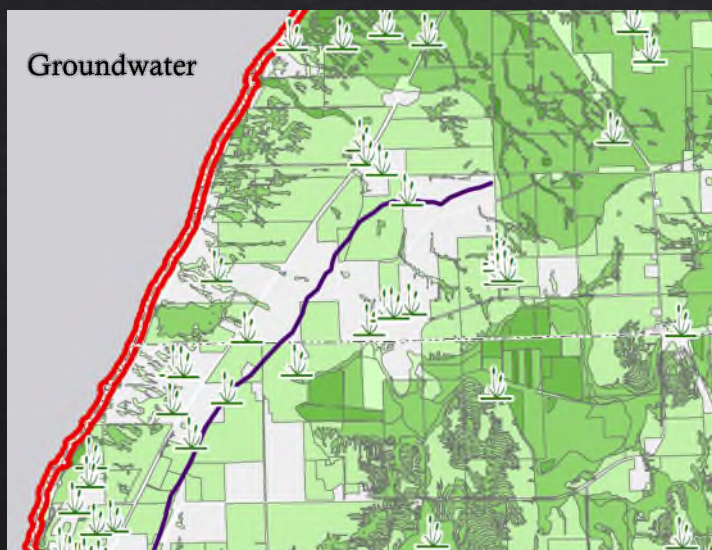
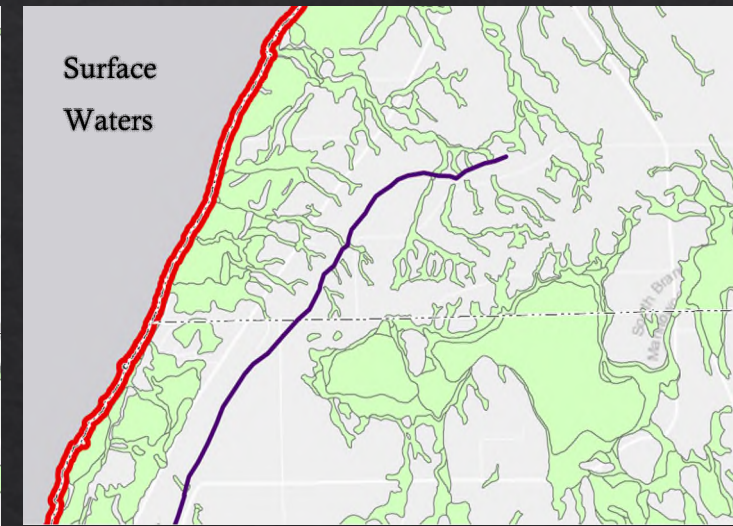
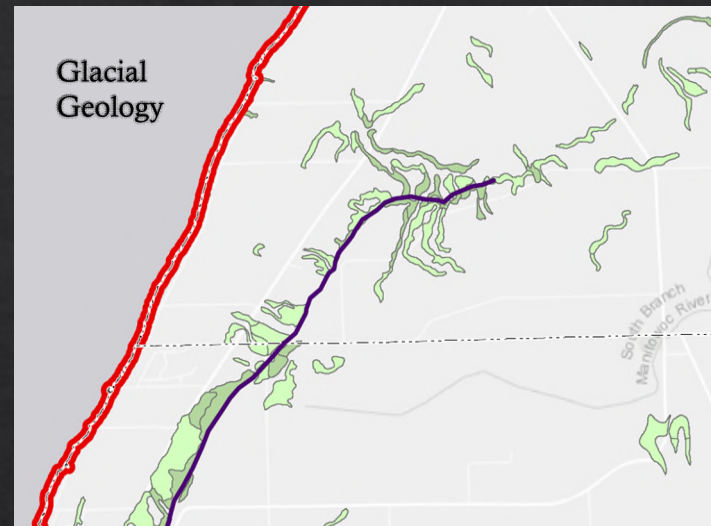
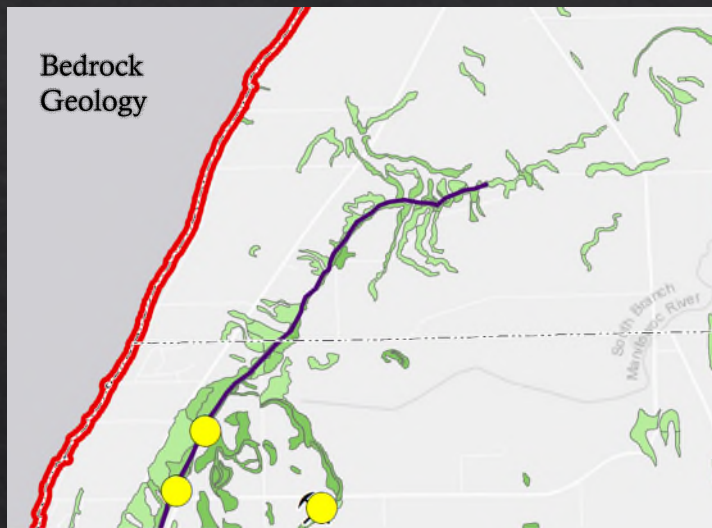
Data ID	Data Obtained	Used/Not Used in Greenway Analysis	Feature Class	Feature Type	Data Format	Resource Importance Ranking (1 low - 5 high)
113	✓	USED	AGRICULTURE	Soils - Prime Ag Lands	POLY	4
114	✓	USED	AGRICULTURE	Existing Vineyards / Grape Growing	POINT/POLY	5
115	✓	USED	PUBLIC LANDS	Federal Land	POLY	5
116	✓	USED	PUBLIC LANDS	WDNR Managed Properties	POLY	5
117	✓	USED	PUBLIC LANDS	Other State Owned Lands	POLY	5
118	✓	USED	PUBLIC LANDS	County Owned Lands	POLY	5
119	✓	USED	PUBLIC LANDS	Municipal Owned Lands	POLY	5
120	N/A		CONSERVATION	Conservation Reserve Program Lands	POLY	N/A
121	N/A		CONSERVATION	Land Trust Conservation Easements	POLY	N/A

Step #3: Thematic Resource Rankings

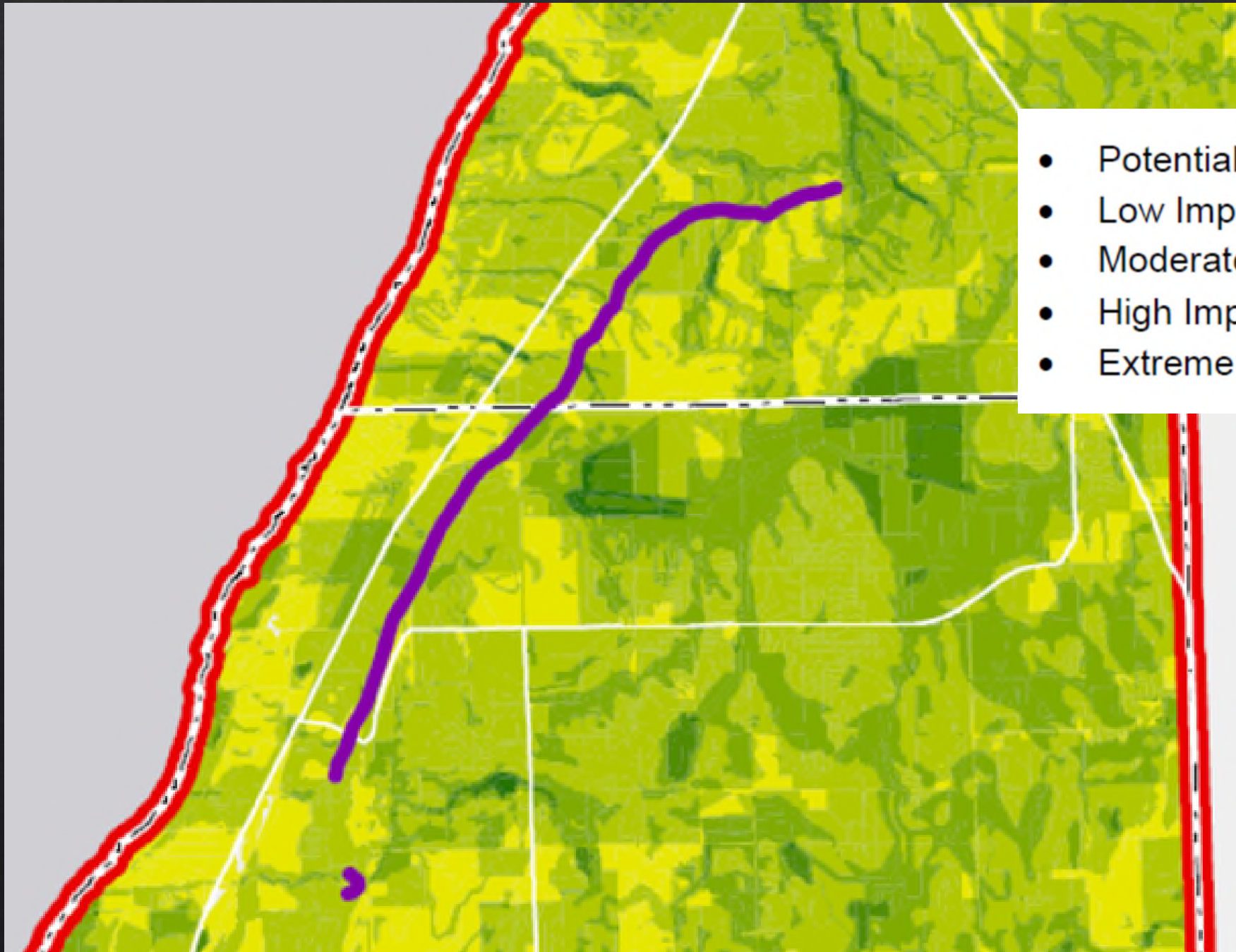
“Union” all ranked GIS layers within each Data Theme and aggregate all Resource Importance Rankings.



Step #3a: Thematic Resource Rankings



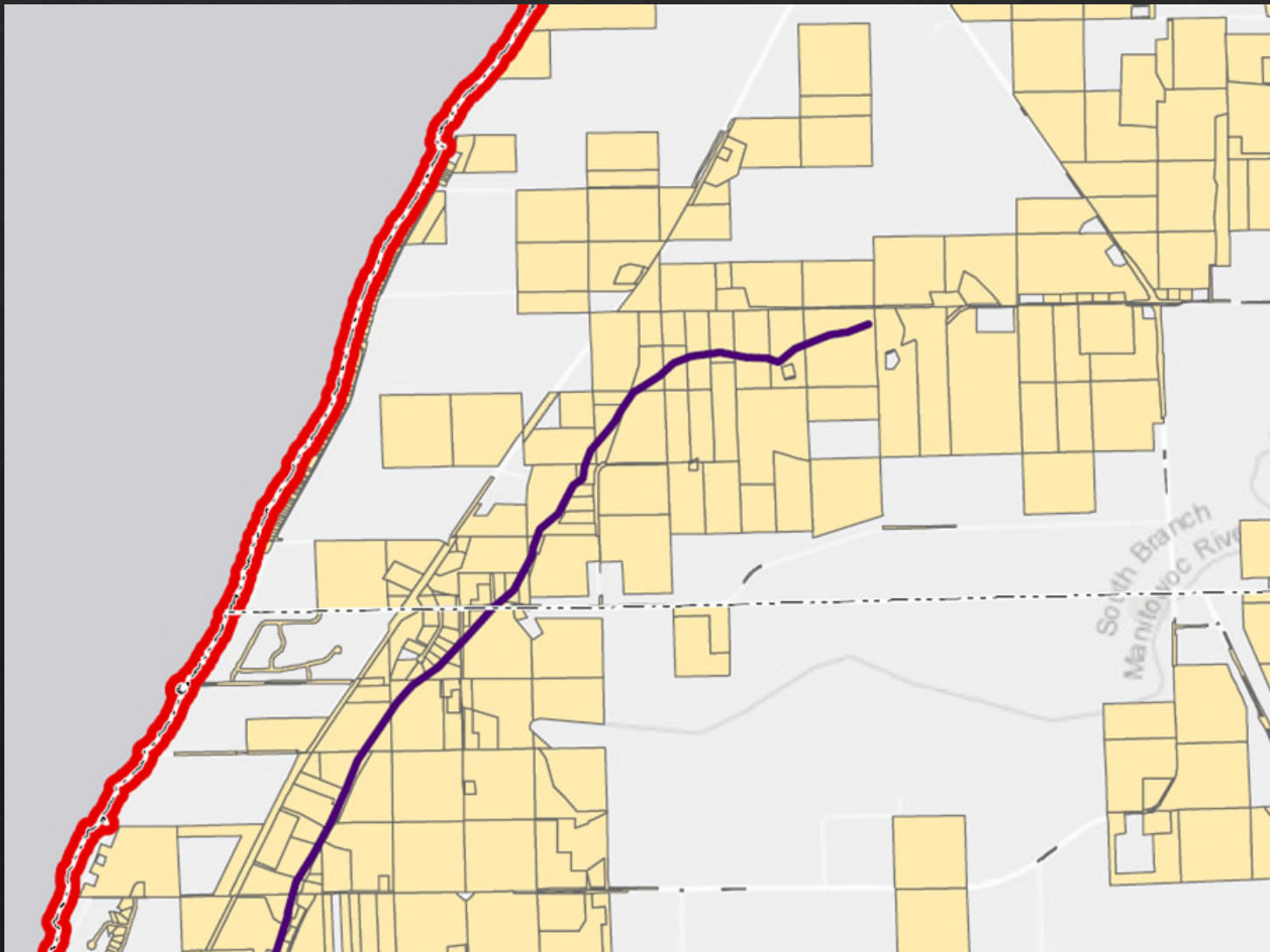
Step #3b: Aggregate Resource Rankings



- Potential Importance (3-15 pts)
- Low Importance (16-23 pts.)
- Moderate Importance (24-31 pts.)
- High Importance (32-39 pts.)
- Extreme Importance (40-54 pts.)

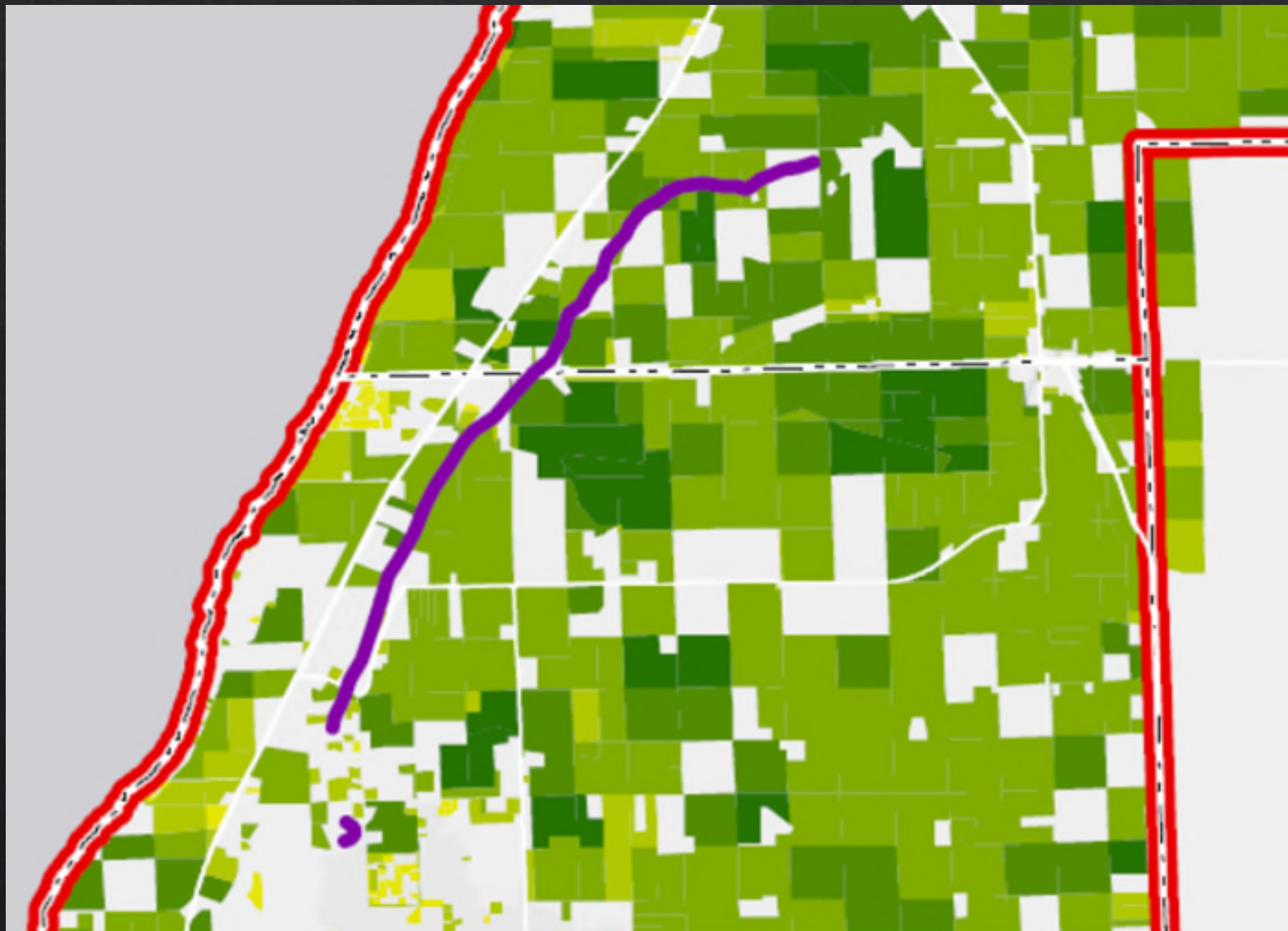
Step #4: ID Vacant Parcels

Created by re-selecting all 2019 parcels with \$0 improvement value.

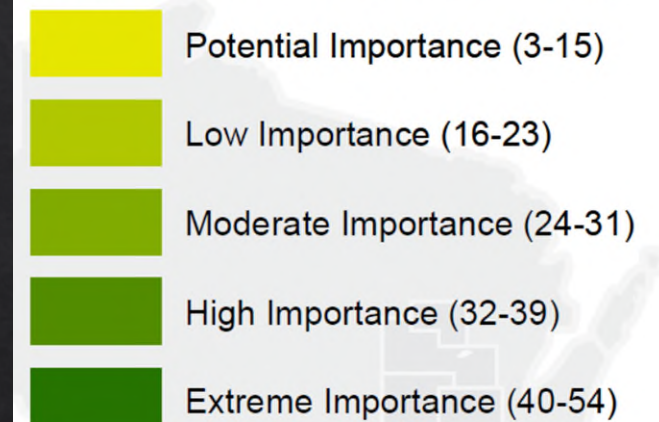


Step #5: Vacant Parcel Aggregate Ranking

“Union” the Aggregate Resource Ranking layers with the Vacant Parcel layer and assign highest value to parcel.

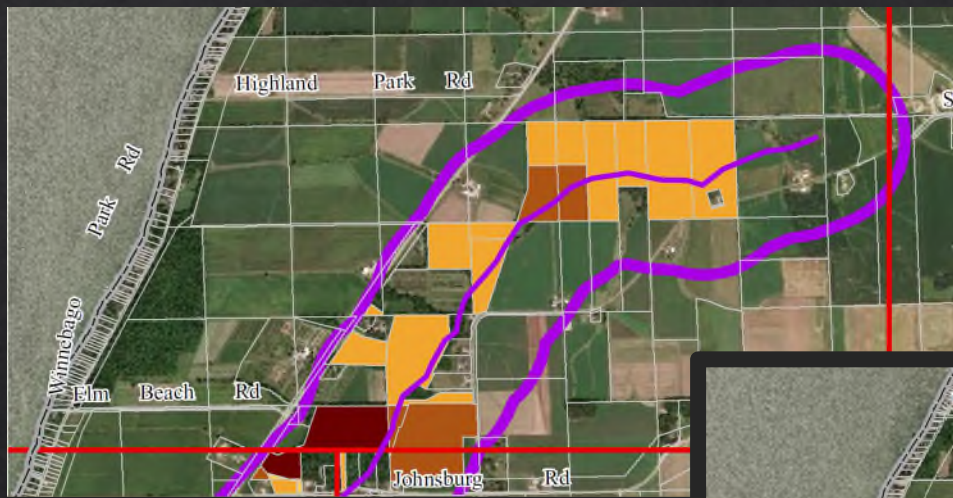


Aggregate Resource Ranking

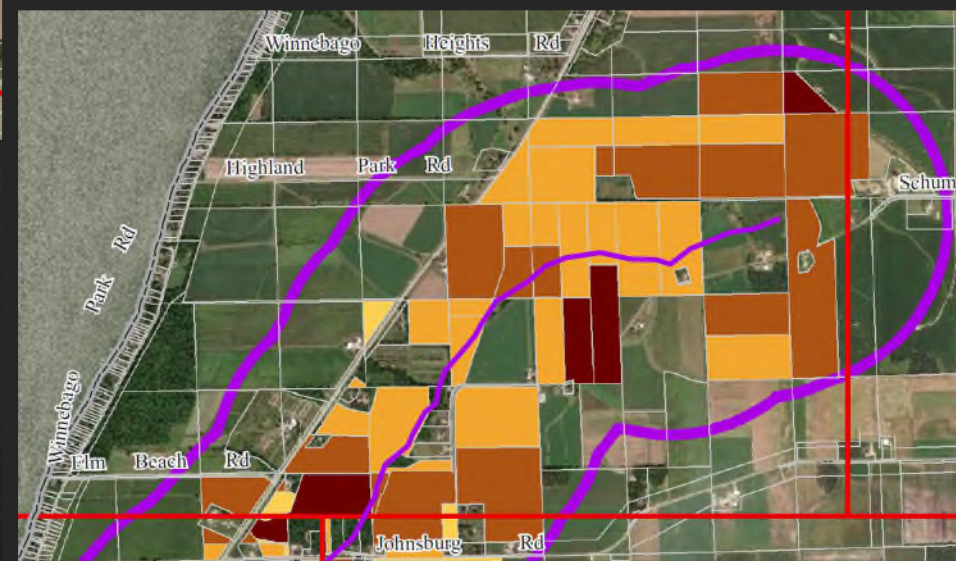


Step #6: Ranked Parcel Proximity

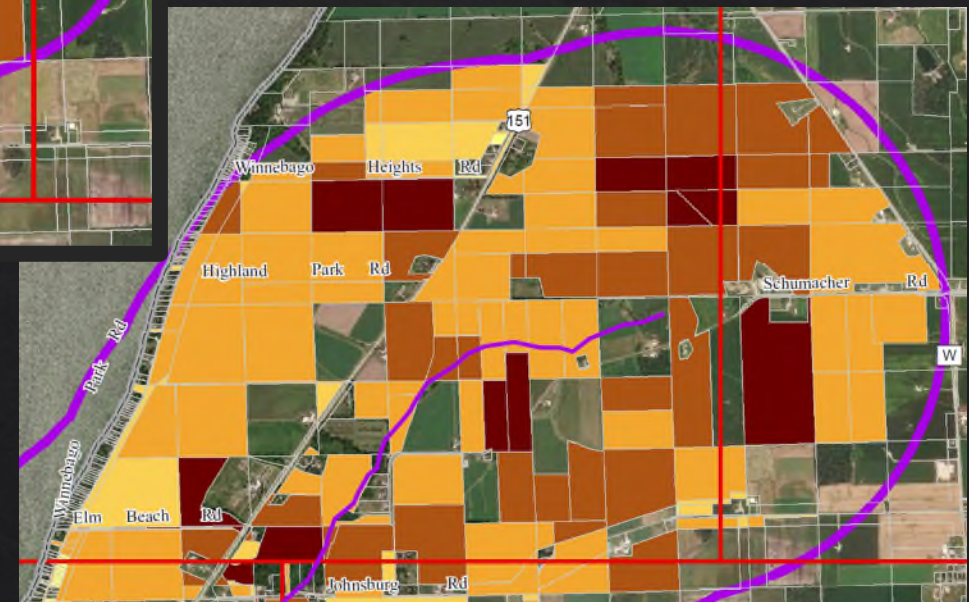
Create three Niagara Escarpment Buffer layers / Clip vacant parcels



1/4 mile (walkable)



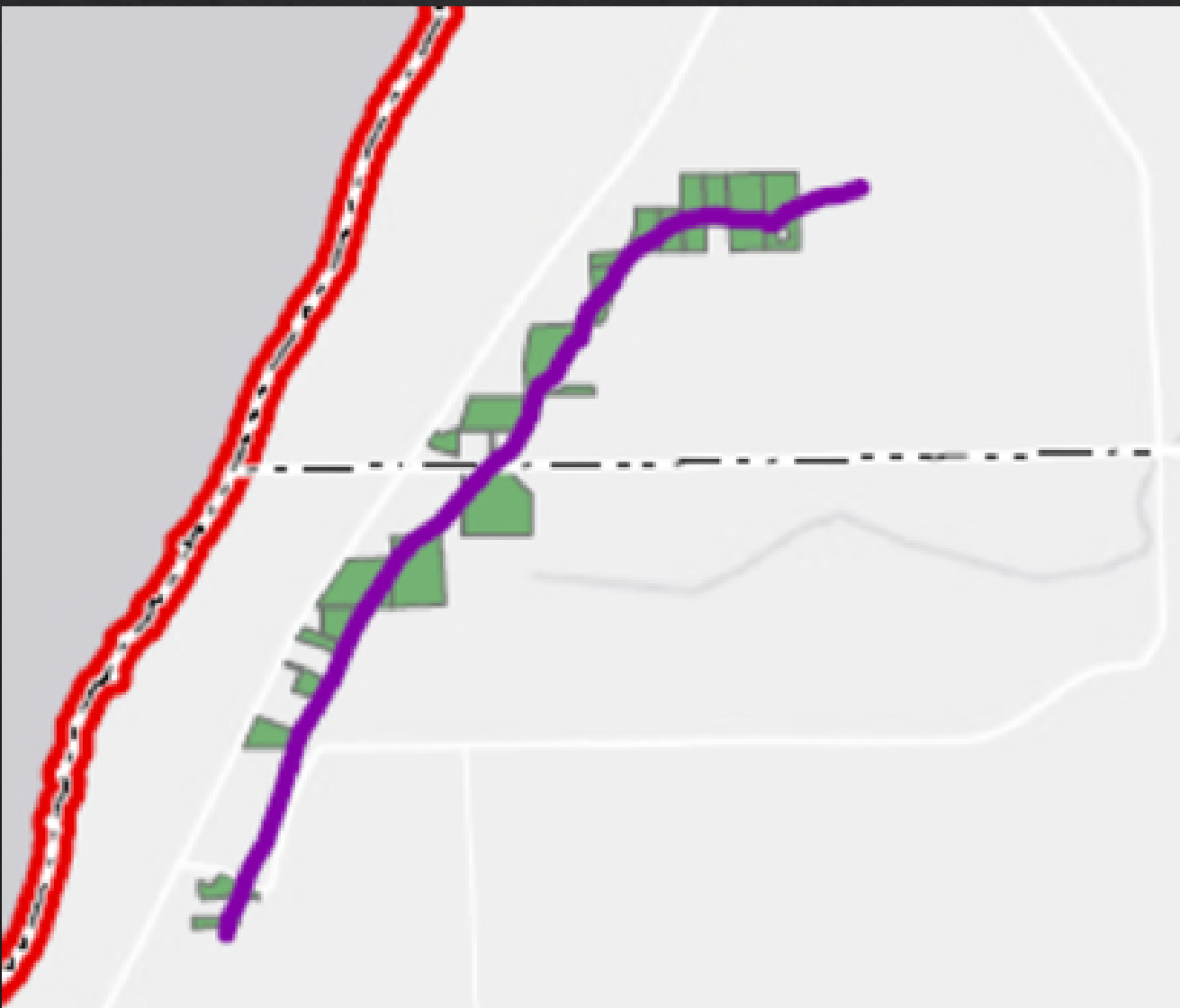
1/2 mile (hikeable)



1 mile (bikeable)

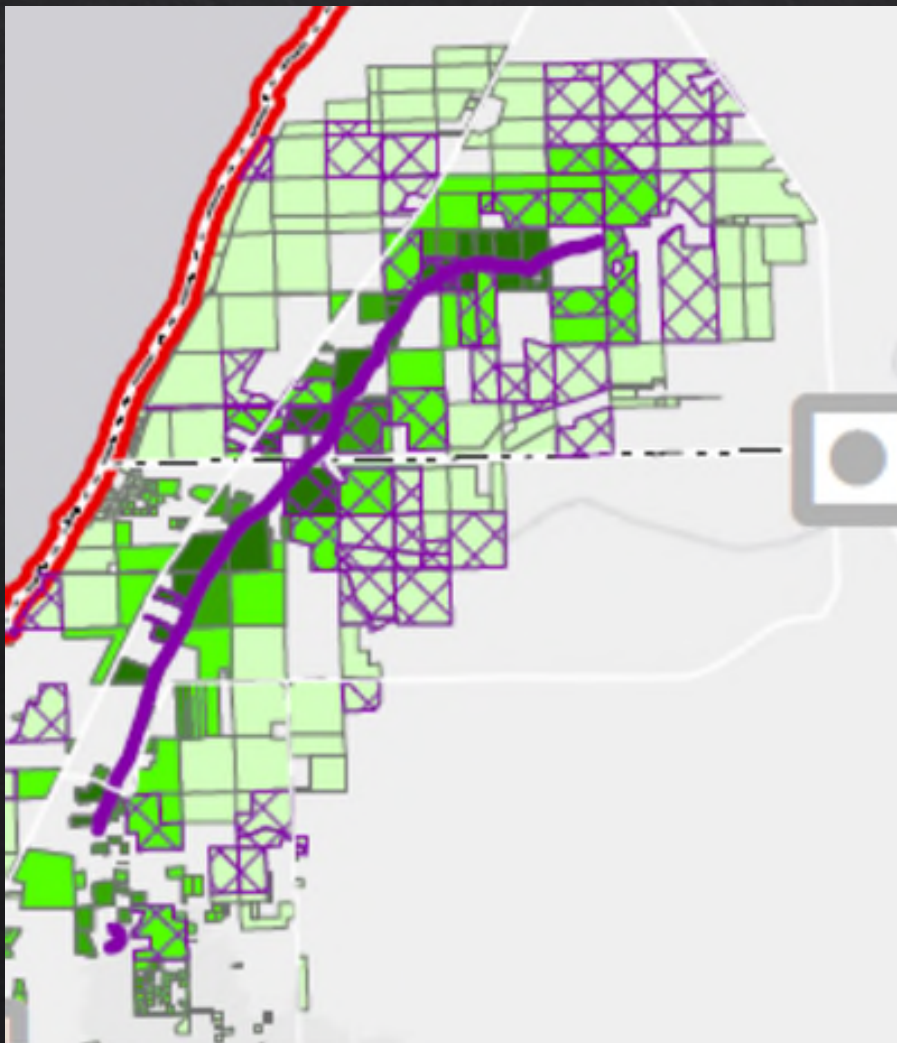
Step #7: ID Niagara Escarpment Vacant Parcels

Created by re-selecting parcels which contain the Niagara Escarpment line feature.



Step #8: Create Niagara Escarpment Greenway Base Maps

Utilizing four of the analysis elements:



1. Aggregate Vacant Parcel Rankings (High & Extreme Importance Only)
2. Niagara Escarpment Buffer Zones (Proximity)
3. Niagara Escarpment Vacant Parcels (Proximity)
4. Publicly Owned & Protected Lands

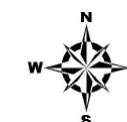
Map 4-1 Proposed Niagara Escarpment Greenway Elements

Historical & Cultural Points

- Performing Arts
- Historical Marker
- Historical Site
- Locally Significant Historic Sites
- Cemetery
- Church
- Library
- Museum
- Yellowstone Trail

- Escarpment Outcrops
- WDNR Managed Land
- Vacant Parcel with Aggregate Ranking 32 or Higher
- MCD Boundary
- Niagara Escarpment Corridor
- Vacant Parcels Intersecting Escarpment Outcrops
- Vacant Parcels - 1/4 Mile Buffer
- Vacant Parcels - 1/2 Mile Buffer
- Vacant Parcels - One Mile Buffer

Source: Parcels from State-wide parcel data set (2018).
Buffers were created by ECWRPC.
Historical & Cultural elements are approximate in location.

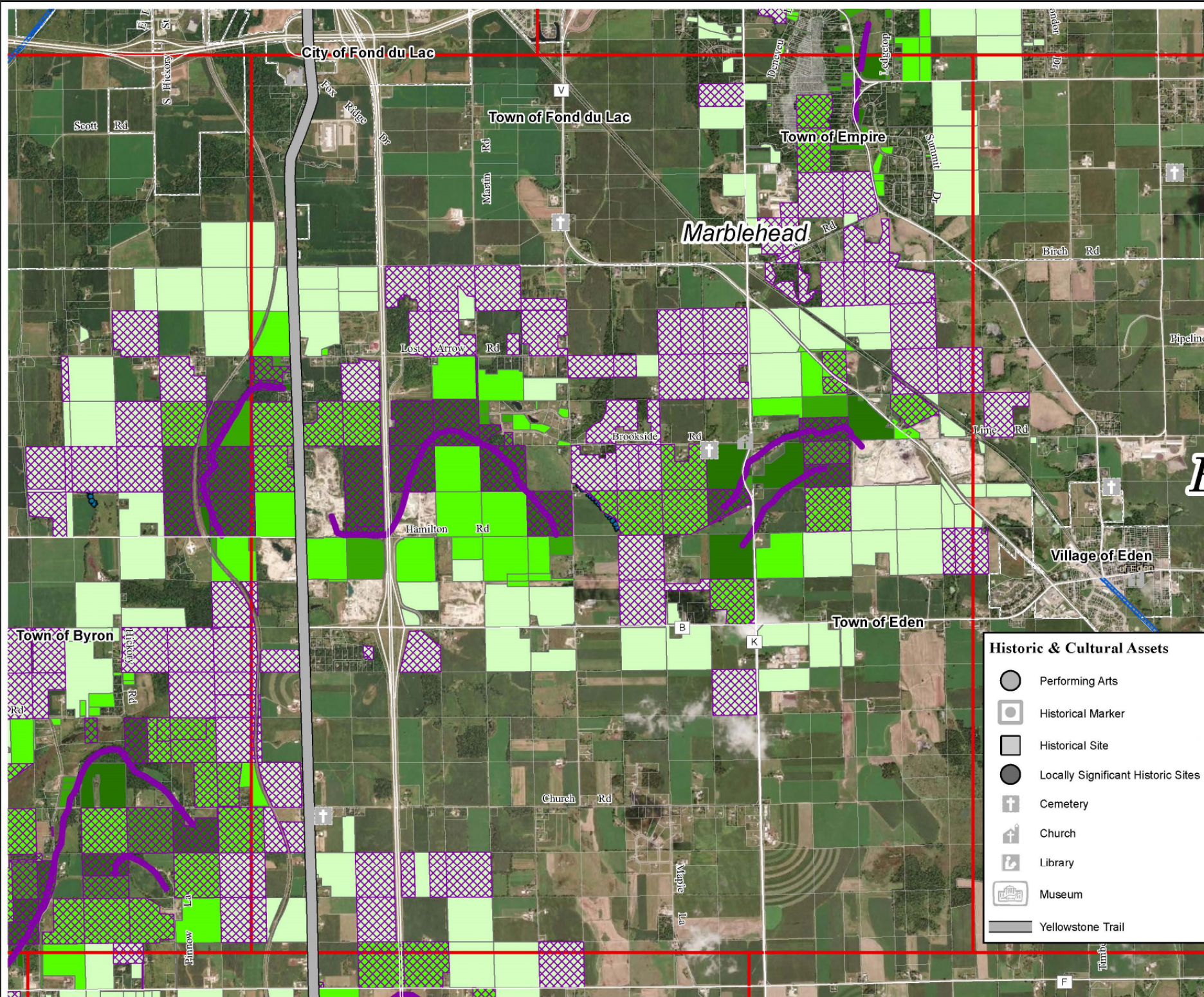


0 1 2 4
Scale in Miles

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PREPARED MAY 2020 BY:





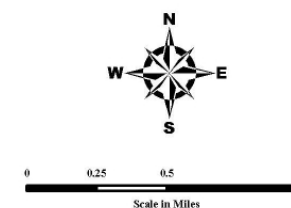
Map C-92 Proposed Niagara Escarpment Greenway Elements

- Escarpment Outcrops
- WDNR Managed Land
- Vacant Parcel with Aggregate Ranking 32 or Higher
- Vacant Parcels Intersecting Escarpment Outcrops
- Vacant Parcels - 1/4 Mile Buffer
- Vacant Parcels - 1/2 Mile Buffer
- Vacant Parcels - One Mile Buffer
- Map Grid
- Parcels
- MCD Boundary
- County Boundary
- Niagara Escarpment Corridor

Historic & Cultural Assets

- Performing Arts
- Historical Marker
- Historical Site
- Locally Significant Historic Sites
- Cemetery
- Church
- Library
- Museum
- Yellowstone Trail

Source: Base data Fond du Lac County
Aggregate Resource Rankings spatially joined to parcels - ECWRPC



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PREPARED MAY 2020 BY:



Niagara Escarpment Definitions

Three definitions are recommended so that moving forward, consistency in terminology and the expression of ideas can be achieved:

Niagara Escarpment: A long, discontinuous, bedrock-controlled cliff or relatively steep slope facing in one general direction. Composed of any and all outcrops, including horizontal exposures at the surface, which form a rock ridge, or series of ridges, along the 'western' edge of the Silurian ('Niagaran') outcrop belt. This includes areas of steep slope (12% or more) that have no rock outcrops that lie between two rock exposures. The escarpment location is mapped based on the best available data but is always subject to field determinations and verification.

Niagara Escarpment Corridor: All parcels of land generally lying within $\frac{1}{4}$ mile of the defined Niagara Escarpment cliff face.

Niagara Escarpment Greenway: All parcels of land generally lying within 1 mile of the Niagara Escarpment cliff face.

Study Recommendations

1. Conduct a secondary **Vulnerability Analysis** of Greenway Parcels.
2. Review Greenway parcel maps closely to **ensure accuracy**.
3. County staff should review the Greenway parcel maps to **identify specific areas of opportunity**.
4. Create an **on-line mapping tool** to display the Greenway parcel information publicly
5. Consider the **development of a PDR and/or a TDR program** applying to the Greenway.

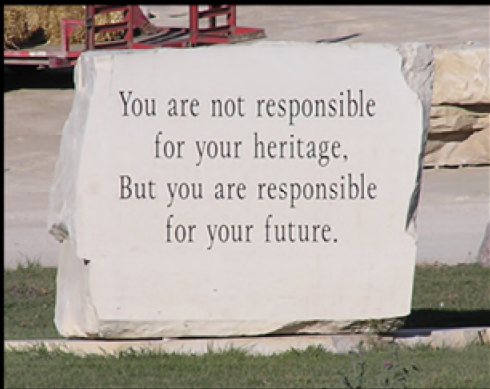
Study Recommendations

6. Formalize Greenway as part of the **County's Smart Growth Comprehensive Plan** as well as integration into local communities' comprehensive plans.
7. Create an **ad hoc Planning Committee** at the County level focused on furthering the Niagara Escarpment Greenway concept.
8. The Greenway should be integrated into updates of existing county and community **Open Space & Recreation Plans**.
9. Work with Study Area communities to encourage a **consistent set of standards, ordinances, and other land use regulations** within the Greenway.

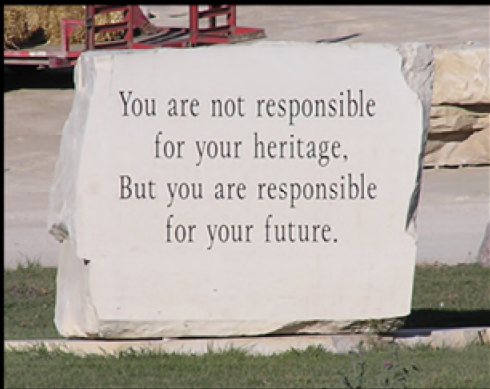
Study Recommendations

10. Support Niagara Escarpment Resource Network to build/launch a formalized **geotourism program**.
11. Promote and **'brand' the Greenway** through local and regional driving tours, designated scenic routes, and common signage.
12. Promote **existing financial incentive programs** such as the Conservation Reserve Program (CRP) or Wetland Reserve Program.
13. **Increase cost-sharing to agricultural lands** for improved conservation practices that are near sensitive land parcels within the Greenway.
14. Partner with local universities to foster and **support additional environmental research and study** within the Greenway.

Review of Greenway Maps



Discussion & Feedback



Discussion Questions

1. Based on the presentation, do you feel that Study and its methodology provide a comprehensive and objective examination of the lands along Fond du Lac County's Niagara Escarpment corridor?

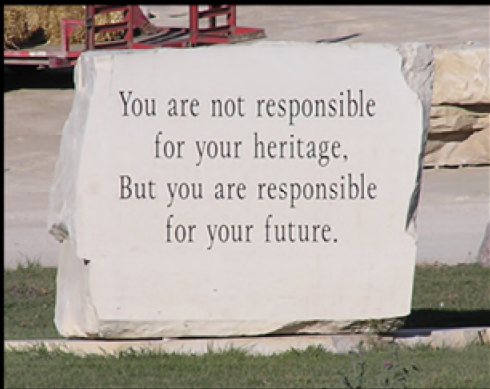
Discussion Questions

2. Based on the maps shown/reviewed, coupled with your personal knowledge of the escarpment's landscape, do you generally agree with the areas and patterns that are identified as being most important from a resource conservation perspective?

Discussion Questions

3. What do you think is the best approach for moving forward to ensure a coordinated vision for escarpment protection throughout Fond du Lac County?

Closing Remarks



Allen J. Buechel
Fond du Lac County
Executive

Thank You!

